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10/731,861

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Seok-Goun Lee

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EXAMINER

BEMBEN, RICHARD M

ART UNIT

PAPER NUMBER

2622

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/731,861 | <b>Applicant(s)</b><br>LEE, SEOK-GOUN |  |
|                              | <b>Examiner</b><br>RICHARD M. BEMBEN | <b>Art Unit</b><br>2622               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 28 is/are pending in the application.
- 4a) Of the above claim(s) 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 25, 26 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group 1 (claims 1-13) in the reply filed on 12 December 2007 is acknowledged. The traversal is on the ground(s) that the species are not independent or distinct as claimed and there would not be a serious burden on the examiner if a restriction were not required. This is not found persuasive for the following reasons:

(1) The species are related, but distinct as claimed. The species are distinct because the claims to the different species recite the mutually exclusive characteristics of such species. Claims to different species are mutually exclusive if one claim recites limitations disclosed for a first species but not a second, while a second claim recites limitations disclosed only for the second species and not the first. See MPEP 806.04(f) [R-3]. In this case, Group 1 (claim 1) requires the rising edge of a second readout signal pulse to be generated at a time  $t_2$ ; Group 2 (claim 14) requires the falling edge of a second readout signal pulse to be generated at a time  $t_2$ . Clearly, claim 1 recites limitations disclosed for a first species but not a second, while claim 14 recites limitations disclosed only for the second species and not the first. The same type of reasoning is used for Groups 3 and 4.

In addition, these species are not obvious variants of each other based on the current record. The timing of the control signals in electronic devices is very specific. Changes to the timing diagram changes the operation or function, however the device may maintain the same effect.

(2) There would be a serious burden on the examiner because Groups 1-4 require a different field of search. Even though the Groups 1-4 may be classified together, they would require different search inquiries to find the different timing diagrams required. See MPEP 808.02 [R-5].

The requirement is still deemed proper and is therefore made FINAL.

### ***Response to Arguments***

2. Applicant's arguments regarding claim 25, filed 12 December 2007, have been fully considered but they are not persuasive.

3. Regarding **claim 25**, the Applicant traversed the 35 U.S.C. 102(b) rejection by U.S. Patent No. 5,539,456 issued to Ishii arguing that Ishii discloses a simultaneous occurrence of the raising edge of the readout signal and the falling edge of the vertical sync signal. The Applicant points to Figure 10 in support of this argument. The Examiner acknowledges that it would appear from Figure 10 that the raising edge of the readout signal and the falling edge of the vertical sync signal are simultaneous.

However, despite the appearance of simultaneous occurrence, the Examiner asserts that the raising edge of the read-out pulse (C of Figure 10) *must* occur after the falling edge of the vertical sync signal (A of Figure 10). This is because vertical sync signal VD is supplied from sync signal generator 16 to timing pulse generator 14, refer to Figure 2 and column 7, lines 20-25. That is, the vertical sync signal (and horizontal sync signal) drives timing pulse generator 14. The read-out pulse is supplied to image pick-up device 12 from timing pulse generator 14 at the end of the vertical scan period,

refer to column 10, lines 13-15 and Figure 10. The end of the vertical scan period is indicated by the falling edge of the vertical sync signal. In order for timing pulse generator 14 to know that the end of the vertical scan period has occurred (causing generation of the read-out pulse), sync signal generator 16 must first supply the falling edge of the vertical sync pulse to timing pulse generator 14. Therefore, the raising edge of the read-out pulse *must* occur after the falling edge of the vertical sync signal.

### ***Examiner's Suggestions***

The Examiner understands how the Applicant's invention is different from the prior art. However, as claimed, claim 25 is sufficiently broad to warrant the current rejection. The Examiner suggests incorporating some of the timing limitations found in method claims 1-13 into claim 25 in order to overcome the current rejection. For example, the readout and brightness measuring sequence found in claim 1. These timing limitations distinguish the Applicant's invention from the prior art and may place the application in condition for allowance.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-13** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: (1) collecting an accumulated

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charge and (2) measuring the accumulated charge. Applicant states, "To measure an average brightness, two things need to be done. First, an accumulated charge must be collected, and second, the accumulated charge must be measured." Refer to p. 9 of Applicant's Remarks. Reviewing claims 1, 5, 6, 7 and 9, the Applicant requires measuring an average brightness, but fails to claim the two steps that the Applicant states are required.

These additional requirements, which are not currently claimed, were known to be essential by the Applicant, yet still omitted from the claims. Applicant's disclosure/admission necessitated new grounds of rejection under 35 U.S.C. 112, second paragraph. Similar to a prior art admission after a non-final rejection has issued necessitating new grounds of rejection, this action will still be made final.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**7. Claims 25, 26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,539,456 issued to Ishii.**

Regarding **claim 25**, Ishii discloses a camera comprising:

an image sensing portion (Fig. 18, "12"; c. 6, ll. 25-30; c. 14, ll. 39-44);

an image signal processing portion (at least Fig. 18, “13, 19, 20, 21, 22, 23, 26, 24, 25, 28”);

a light emitting device (Fig. 18, strobe “9”);

a light emission driving portion (c. 14, ll. 61-65; Fig. 18, “39”);

a microcontroller that generates a control signal and transmits the control signal to the light emission driving portion (c. 14, l. 61 – c. 15, l. 23; Fig. 18, “27”);

and a timing signal generator that generates both a read-out signal and a vertical sync signal and transmits each of the read-out signal and the vertical sync signal to both the image sensing portion and the microcontroller (c. 7, ll. 18-27; Fig. 18, “14”).

wherein the rising edge of each read-out signal is generated after the falling edge of each vertical sync signal (Fig. 10, “A” and “C”). Also refer to the discussion in

***Response to Arguments.***

Regarding **claim 26**, Ishii further discloses that the read-out signal comprises substantially smaller pulses than the vertical sync signal (Fig. 10, “A” and “C”).

Regarding **claim 28**, Ishii further discloses that the camera is a digital camera (refer to the rejection of claim 25).

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD M. BEMBEN whose telephone number is (571)272-7634. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a



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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard M Bemben/  
Examiner, Art Unit 2622

/Nhan T. Tran/  
Primary Examiner, Art Unit 2622